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SUMMARY

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THE PROBLEM OF THE CEMENT FACTORY IN THE CONSTRUCTION NEEDS OF THE DEVELOPMENT COUNTRIES

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(a) The cement factory in industrial countries evolves towards large units which, first of all, give savings in manpower and energy. This framework of maximum productivity is not appropriate to the cement works in developing countries where labour is abundant, if less skilled.

(b) The design of a cement works can only be envisaged if all the geological, geographical, financial, economic, and technical factors are taken into account. Once the problems of raw materials and energy are solved, it is the potential consumption which determines the technique.

(c) Limiting himself to the developing countries of French-speaking central Africa, the author shows that the necessary limestone deposits are non-existent in some countries (Ivory Coast), inadequate (Dahomey), or of poor quality because of excess of magnesium (Sudan, Upper Volta) and sometimes badly sited geographically for the consumer (Cameroons).

(d) If appropriate limestones and energy supplies are available on the spot, it is the potential consumption which determines the technique. A modern unit cannot be considered for any potential consumption smaller than 80,000 to 100,000 metric tons per annum. The example of the cement factory at Rufisque is characteristic, with an output of 200,000 metric tons per annum - enough to satisfy the potential consumption of Senegal.

(e) For a potential consumption between 30,000 and 80,000 metric tons per annum, a modern unit does not appear satisfactory. It should be more efficient and appropriate to install a small cement works using the old, but improved cement-making techniques. This solution has technical and social advantages in that it trains more men. It is also cheaper and enables local pozzolanas to be used.

(f) Finally, even smaller potential consumptions than 30,000 metric tons per annum can only be met by imports or possibly by a crushing station for imported clinker.

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